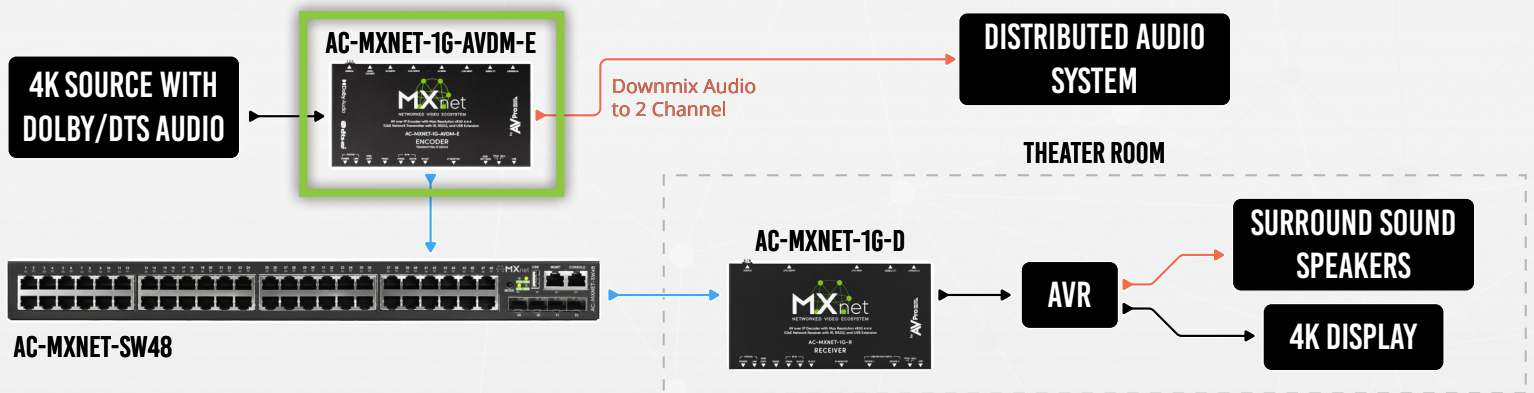# MXNET 1G DOWNMIXING ENCODER
(AC-MXNET-1G-AVDM-E)

The AC-MXNET-1G-AVDM-E Encoder is the audio processing and downmixing cousin to our standard-issue AC-MXNET-1G-E Encoder. As with our standard Encoder, this is where the signal starts. However, the AC-MXNET-1G-AVDM-E Encoder was specifically designed to integrate with multi-zone stereo/mono audio mixing systems. The AC-MXNET-1G-AVDM-E Encoder employs a specialized audio processor chipset that can accept and decode Dolby Audio, DTS Audio®, and other lossless audio formats and output those signals as stereo through the provided balanced stereo terminal block on the unit.

The AC-MXNET-1G-AVDM-E will encode a 4K video signal – along with audio, control, and power. These signals are passed to single or multiple Decoder endpoints via multicast routing through an MXNet or multicast compatible L3 managed network switch. And, it does all this with next to zero latency. MXNet Encoders encode audio/video/control signals into IP packets using an optimized JPEG2000 codec at a flexible data rate (200Mbps for 1080p content, 300Mbps for 4K30 content, 850Mbps at peak). The AC-MXNET-1G-AVDM-E Encoder also supports stand-alone point-to-point applications when connected directly to an AC-MXNET-1G-D Decoder.

The AC-MXNET-1G-AVDM-E Encoder is only one part of the MXNet Ecosystem that includes Encoders, Network Switches, Control Processors, and other various components designed to facilitate the building of a custom A/V distribution system. MXNet's Ecosystem includes formatting such as resolution scaling, full EDID management, multifaceted video walls, and includes the MXNet Mentor setup and control tool - making installations easy on the integrator, while also presenting a major WOW factor for your client.
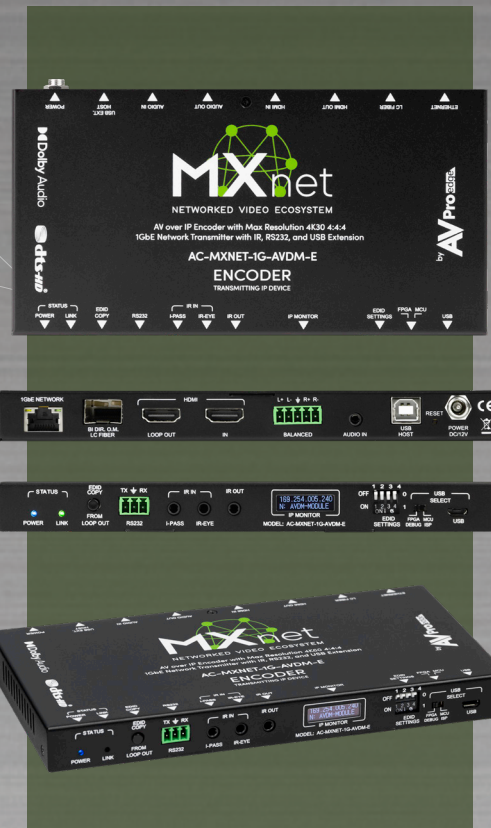
MXNET DOWNMIX AUDIO DIAGRAM

HDMI	
CAT 6A	
AUDIO	

AC-MXNET-1G-AVDM-E

4K SOURCE WITH DOLBY/DTS AUDIO

Downmix Audio to 2 Channel

DISTRIBUTED AUDIO SYSTEM

THEATER ROOM

AC-MXNET-SW48

AC-MXNET-1G-D

AVR

SURROUND SOUND SPEAKERS

4K DISPLAY

PRODUCT SPECIFICATIONS

Encoding:	
Video Codec	Proprietary Codec based on M-JPEG
Audio Codec	Proprietary Codec
Latency	16ms@60Hz
Streaming Protocols	TCP, UDP, IP, IGMP-V2
Copy Protection	HDCP 2.2 and earlier

Video Input/Ingestion	
Signal Type	DVI 1.0(ingested, outputs as HDMI), HDMI 2.0b
Video Resolution	720p@50/60Hz; 1080p@24, 50 & 60Hz; 4K@30HZ
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0 (Compresses to RGB output) RGB
Bit Depth per Color	1080p (8-, 10-, 12-, 16-bit), 4K (8-,10-, 12-bit) (Compresses to 8-bit output)
Visually Lossless	1080p@60Hz SDR RGB (8-bit), 4K@30Hz SDR RGB (8-bit)

Audio	
Audio Format (end to end)	PCM 2, 5.1, 7.1 Channel, Dolby Digital 5.1 Channel, Dolby Digital Plus, DTS 5.1 Channel, DTS–ES, DTS–HD High Resolution
Audio Format (HDMI Loopout)	Same as End to End, with the addition of Dolby MAT 8Ch
Embedded Audio	Stereo Analog Audio (3.5 mm jack)
De-Embedded Audio	Balanced Stereo Analog Audio (5pin phoenix) (Downmixed audio)

Communication/Control of External Devices	
USB	HID-Compliant
Serial/RS-232	Bidirectional Device Control / Monitoring
IR	Bidirectional Device Control / Extension
HDMI	HDCP 2.2, EDID Management (Encoder), CEC (Decoder)

Ports	
Ethernet	(1) × female RJ45
SFP	(1) × SFP Slot
HDMI	(2) × HDMI Type A 19-pin, female, one HDMI input, one HDMI loop out
Audio	(1) × 5 Pin Terminal Block, Balanced L/R Audio out (1) × 3.5 mm mini stereo jack, Audio in
IR	(1) x 3.5 mm mini-stereo jack (IR-PASS) (1) x 3.5 mm mini-stereo jack (IR-EYE) (1) x 3.5 mm mini-stereo jack (IR-OUT)
RS232	(1) × 3-pin Terminal Block
USB	(1) × USB 2.0 Type-B for USB keyboard/mouse extension (1) × USB Micro for MXNET service

Distance	
Ethernet	100 Meters/ 330 Feet over CAT5e and above
SFP and Fiber	1000BASE-SX SFP Transceiver Module (MMF, 850nm, 550m, LC, DOM) 1000BASE-LX/LH SFP 1310nm 10km Transceiver Module

Environmental	
Operating Temperature	23 to 125°F (–5 to 51°C)
Storage Temperature	–4 to 140°F (–20 to 60°C)
Operating Humidity	5-90% RH (No Condensation)
Cooling	Fanless Cooling
Acoustic Noise Level	0dB

Power	
Max Power Consumption	8.5W
PoE (Power over Ethernet)	IEEE 802.3af (15.4W)
Power Supply Unit	Input: AC 120–240V–50/60Hz 0.8A Output: DC 12V 2A

Dimensions	
Mounting	Rack and Furniture mount support
Dimensions (Unit Only Width/ Depth/Height)	mm: 199.14 X 103.12 X 13.47 inch: 7.84 X 4.06 X 0.53
Dimensions (Packaged Width/ Depth/Height)	mm: 309.88 X 180.09 x 54.10 inch: 12.2 X 7.09 X 2.13
Weight (Unit)	1.25 lbs/0.55 kg
Weight (Packaged)	1.65 lbs/0.74 kg
Regulatory	CE/FCC/UL
Product Wartanty	10 Years

Specifications subject to change without notice. Mass & dimensions are approximate

FEATURE SET

- 1G Maximum Data Rate

- Stereo downmixing of multichannel audio formats

- Bandwidth management via MXNet Mentor

- Uses any standard category cable (CAT 5e or better)

- SPF Fiber Connection for Long Runs

- Built-In "Data Window" OLED display

- USB/KVM Host support

- Full Exterior Light Control (for discreet Installs)

- RS-232 and IR Direct Routing to one or many Decoders

- RS-232 over IP serial passthrough support